

IN THE CLAIMS

Please cancel claims 27-30.

Please amend Claims 1-6, 9-12, 13-16, 19-22, and 24-30 in accordance with the following rewritten claims in clean form. Applicant includes herewith an Attachment for Claim Amendments showing a marked-up version of each amended claim.

1. (AMENDED) A method of fabricating a self-assembled monolayer of a substance on a substrate comprising depositing the substance on the substrate using compressed carbon dioxide as a solvent medium for the substance.

2. (AMENDED) A method as claimed in claim 1, wherein at least one of pressure and temperature of the compressed carbon dioxide is selectively controlled so as to enhance a density of the self-assembled monolayer on the substrate.

3. (AMENDED) A method as claimed in claim 1 comprising the use of a co-solvent in combination with the compressed carbon dioxide.

4. (AMENDED) A method as claimed in claim 3, wherein the co-solvent comprises at least one of H₂O, CH₃OH, CF₃OH, CF₃CH₂OH, CF₃CF₂OH, (CF₃)₂CHOH, CH₄, C₂H₄, C₂F₆, CHF₃, CClF₃, C₂H₆, SF₆, Propylene, Propane, NH₃, Pentane, ¹PrOH, MeOH, EtOH, ⁱBuOH, Benzene, and Pyridine.

5. (AMENDED) A method as claimed in claim 1, wherein the substrate comprises a metallic substance.

6. (AMENDED) A method as claimed in claim 5, wherein the metallic substance comprises at least one of gold, silver, copper, iron, mercury, palladium, gallium arsenide, ferrous oxide, and indium tin oxide.

9. (AMENDED) A method as claimed in claim 7, wherein X comprises a thiol.

10. (AMENDED) A method as claimed in claim 7, wherein Y comprises a CF₃ functional group.

11. (AMENDED) A method as claimed in claim 7, wherein m and n lie within a range of 1 to 20.

12. (AMENDED) A method as claimed in claim 11, wherein m and n lie within a range of 5 to 10.

14. (AMENDED) A method as claimed in claim 7, wherein Y further comprises at least one of vinyl, styryl, acryloyl, methacryloyl and alkyne in combination with a spacer group.

15. (AMENDED) A method as claimed in claim 14, wherein the spacer group

comprises at least one of CH_2 and CF_2 .

16. (AMENDED) A method as claimed in claim 1, wherein the substrate comprises at least one glass, mica, SiO_2 , Al_2O_3 , and Ga_2O_3 .

19. (AMENDED) A method as claimed in claim 18, wherein Si comprises at least one of SiCl_3 , $\text{Si}(\text{OCH}_3)_3$, $\text{Si}(\text{OCH}_2\text{CH}_3)_3$, $\text{Si}(\text{OCH}_3)_2\text{Cl}$ and $\text{Si}(\text{CH}_2\text{CH}_3)_2\text{Cl}$.

20. (AMENDED) A method as claimed in claim 17, wherein Y comprises a CF_3 functional group.

21. (AMENDED) A method as claimed in claim 17, wherein m and n lie within a range of 1 to 20.

22. (AMENDED) A method as claimed in claim 21, wherein m and n lie within a range of 5 to 10.

24. (AMENDED) A method as claimed in claim 17, wherein Y further comprises at least one of vinyl, styryl, acryloyl, methacryloyl and alkyne in combination with a spacer group.

25. (AMENDED) A method as claimed in claim 24, wherein the spacer group comprises at least one of CH_2 and CF_2 .

26. (AMENDED) A method as claimed in claim 17, wherein the self-assembled monolayer has an ellipsometry thickness of about 30Å and a water contact angle of about 110°.